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ON THE VITAL ENDOWMENTS OF NERVES.

[Continued from page 480, vol. 50.]

THE common belief of vital properties of nerves, which this view opposes, derives its chief support from the authority of Sir Charles Bell, whose researches are well known; and a comparison of the principles just laid down with certain physiological and pathological phenomena, in order to show the manner in which these last are elucidated by them, would naturally lead us to advert to those of that writer. In the first place, then, I would state, that the conclusions of Sir Charles Bell never flowed legitimately from his premises. In his first experiments on the fifth nerve, before he had any theory to support, or rather before his theory had assumed a definite form, he drew the inference that this nerve was for motion. This, therefore, was the natural inference; and though subsequently, when on finding that it did not tally with those he drew from his experiments on the spinal marrow, he withdrew and reversed it, still there were residual phenomena, which threw serious doubts on its correctness in its amended form. The loss of all power in the lip, in an animal whose chief sense of touch resides in the lips, and the motions of which, would naturally be associated with it, the dropping of the mouth, and the drawing it to one side, seemed to indicate that something more than sensation was destroyed. Many labored attempts have been made to reconcile this contradiction by his followers. But they have not been successful. Contractions of the iris have also been produced by irritating the fifth; some distortion is produced by paralysis of that nerve; it sends fibres to muscles, and there are other signs of its agency in contracting certain muscles of the face, particularly the eyelids. Now all this is readily explicable on the supposition that the mind employs the fifth for touch, and those motions which it performs under the direction of touch.\*

\* For a full account of Sir Charles Bell's errors in relation to the fifth nerve, the reader may consult James O'Beirne's analytical correction of that writer's views respecting the nerves of the face, re-published, in this country, in the "Register and Library of Medical and Chirurgical Science," for 1834. Dr. O'Beirne comes to the conclusion, that either the fifth nerve must be allowed to have some other office than touch, or the motor portion must extend to branches of it, not now conceded by anatomists—which last alternative he adopts. Indeed, it is the chief object of his essay to prove it. The view above given accords with the first. In one of the observations quoted by him, Sir Charles himself expressly admits "a power of holding by the lips, independent of the seventh nerve."

Again, if we pass from the nerves of the face, to the spinal marrow, we find his experiments at once in conflict with those of Magendie and Bellingeri. While Sir Charles inferred that the anterior cords were for motion, and the posterior for sensation, Magendie inferred that the former were for motion chiefly, and the latter for sensation chiefly; and Bellingeri that the first were for the movements of flexion, and the last for those of extension. Scarcely anything deserving the name of an attempt to reconcile the results of those of the English, with those of the Italian physiologist, has been made. But since the discovery of the reflex function, Dr. Carpenter has endeavored, by the aid of special pleading and patchwork, to make the others coincide. By the reflex function, he explains, with some plausibility, how motions are produced, when, after section, the proximate ends of the posterior cord are irritated.\* But when he explains how it is that sensation takes place through the anterior cord, he assumes the thing to be proved, and then makes use of it to prove itself. For he supposes that sensitive fibres from the posterior cord pass up from the point of union of the two cords towards the spinal marrow, not because they have been traced anatomically, but solely on the ground that dividing the posterior cord puts a stop to the exhibition of sensation when the anterior is irritated. The true question is, whether there *are* any fibres either in the anterior or posterior cords by whose vital endowments sensation takes place. Is it not most natural to suppose, that irritation of the cut end of the anterior cord occasions convulsive or painful contractions of the muscles, and the connection being maintained by the posterior, the animal exhibits indications of suffering?

The value of all such experiments has been very much overrated. In reasoning from them, it should be borne in mind, that the anterior reaches the nerve below the ganglion, and the posterior reaches it above or through the ganglion. It is admitted to be difficult to make a physical irritation pass through a ganglion; that ganglion was once the end or point of union of fibres below it, distributed both to sensitive surfaces and to muscles. When the tension of the nerve is kept up from the spinal marrow, then physical irritation would be propagated in both directions; would excite contractions in the muscles below, and painful feelings in the mind; because both of these affections are associated with them. But when the nerve is cut above the ganglion, which is the usual place of section, while irritation of the proximate end would occasion feeling, irritation of the distal end would probably be null, even supposing the nerve to be connected with touch, and the motions directed by

\* The inconsequence of this conclusion is shown by an experiment of M. du Bois-Reymond. "If any motor nerve be selected which divaricates into two branches (as, for example, the sciatic nerve of a frog, which divides above the bend of the knee into the tibial and peroneal branches), and a galvanic stimulus be applied to either of these branches, this having been first divided above its insertion into the muscles, the electrotonic state will be developed, not merely in the portion of the trunk continuous with that branch, but also in that which is continuous with the other branch, as will be made apparent by the contraction in the muscles supplied by the latter."—(*Carpenter's Physiology, Fifth American Edition*, pp 653-4.) Here we have an undoubted instance of an irritation being transmitted through a nerve, when severed in part from its natural connections, in a manner opposite to the physiological mode of such transmission, as generally understood. Can any one say, that when the proximate ends of the posterior cords are irritated, the resultant motions through the anterior are not of an analogous character?

touch. In like manner, irritation of the anterior cord, whether connected with the spinal marrow or not, would occasion nothing but muscular contraction, for that is all that was ever associated with it by the mind, if we suppose the anterior cords are the medium connecting the cerebrum with the muscles, through which the mind governs the motions under the direction of the specific senses.

The cause of the observation of Bellingeri of movements of extension, when the posterior columns were irritated, &c., was the fact that movements of extension are more associated with touch, and movements of flexion are more under the direction of the specific senses. The body balances itself on the feet, and extends itself in the erect position, as it is directed by touch, while the work of the hands, in which flexion predominates, is more under the direction of the eye. To this it may be added, that the body is habitually extended in the waking state. The same principle accounts for the greater frequency of movements of extension in tetanus, where the wound usually involves the nerves of touch, since they are spread over the greater surface of the body. And it comes into play, also, in accounting for some of the phenomena of hemiplegia, and paraplegia, as we shall see when we come to speak of the cerebellum and diseases of the posterior columns of the cord.

Experiments performed on lambs by Calmeil, quoted by Prof. Nasse, of Bonn, as well as the experiments of M. Brown Séquard lately performed at Boston, are sufficient to show that the posterior columns have something to do with muscular contraction. It is also stated by Carpenter, that a limb whose anterior cords are divided, if the posterior are untouched, maintains its size. Now as the nutrition of muscles is kept up by their contractions, this fact plainly indicates, much more than direct irritation of the roots, that these roots have an agency in producing contractions. Cases have been published, says this author, in which there has been complete destruction of the anterior columns without loss of motion, and of the posterior without loss of sensation. This ought to be decisive of the question. If motion depends on a vital endowment of the anterior column, then disorganization of it *must* be followed by complete loss of that power. But if it depends on a power of the mind, there is a chance, in the first place, for a vicarious operation. The *vis medicatrix nature* may also come in play. And if a part of its motions are performed through the agency of the anterior cords, and a part through the posterior, as they are directed by the specific senses, or by the sense of touch; then the operation is all the easier. We can understand, also, how it is that sudden injuries produce total loss of muscular power below the seat of them, while disorganizations as grave, which have been the effects of a slow process of disease—or which have been sudden, and not quickly fatal, so as to allow the recuperative energy to display itself—have been followed by opposite and contradictory results. A striking illustration of these remarks is afforded by one of the cases referred to by Carpenter—the case reported by Mr. Stanley in vol. xxiii. of the Medico-Chirurgical Transactions. There was loss of motive power of the lower extremities without loss of sensation, attending disorganization of the posterior columns of the spinal mar-

row from their commencement to their termination; a point blank refutation of Sir Charles Bell's views. Every one who saw this case before death, predicted disease of the anterior column. But on examination this portion was found perfectly healthy, "white, and of a firm consistence" throughout, while the posterior was of a dark color and soft consistence, the line of demarcation being as straight as a line could be drawn between the two portions. Here, then, was general disease of the posterior column of the spinal cord, and disease isolated in that part. It was natural to expect disturbance in the function belonging to that part, and nothing else. How happened it that sensation was not lost, if sensation, as a whole, belonged to the posterior column? In this respect, there is reason to believe that the observation was faulty. Under the term general sensation, have been ranked affections which should have been kept distinct. The organic feeling, and the localizing of that feeling, are two things.

Again, the sensations of pain, of heat, and of touch, are three different things; and although the same nerves running from the superficies may be concerned in producing all of these, their central connections may have different offices with regard to them. The posterior columns being the commissural connection between the cerebellum and the nerves of touch, may only be instrumental in making the mind conscious of tactile impressions, or they may be simply instrumental in enabling the mind to *localize* the sensations and to discriminate their kinds. There are a number of facts which seem to point to this latter conclusion. But the observer being impressed with the idea of sensation as a whole, belonging to the posterior column, if the paralytic person exhibits the least sign of feeling and is conscious of it, he is apt to regard that function as intact. Emotion with reference to the mind, and pain with reference to the body, are correlative facts. One is deep feeling grounded on ideas; the other is deep feeling grounded on bodily injury or disorganization. They both seem to affect the mind in a department deeper than the range of the conscious discriminative sensations and volitions. Hence, when the connection between the two brains and the muscles is interrupted, and voluntary power over the latter is withheld, emotion still gives rise to convulsive movements. Hence, too, in profound diseases of the nervous centres, both spinal and cephalic, as brought forward and nearly established by Dr. Gull, there is greater loss of motion than of sensation. In the case in question, pricking, pinching and scratching, were all the means resorted to, as reported, to test the sensibility of the skin, all of which may be supposed to excite a degree of pain.

Again, it may be asked, how happened it that motion was lost, while the anterior column was healthy, if motion, as a whole, belongs to that portion? The answer to this inquiry is too obvious to require comment.

A third question, more pertinent to our purpose, is this—How happened a disease which was general throughout the posterior columns, and which of course must affect the general function of those columns, to produce paralysis of the inferior extremities alone? If the function of this part depended on an inherent vital endowment of it, we should have overwhelming proof that that function was to give motion to the

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lower extremities. But it is not thus lightly to be disposed of. That we are ordinarily guided by touch in the movements of the lower extremities, I need not waste words in proving. Our consciousness informs us of this fact. Or if it does not, pathological observations teach us that when the sense of touch is wanting, the eye has to be turned down to the extremities in order for the body to be balanced on the feet. Now, if the habitual motions of the lower extremities are directed by touch, and if the commissural connection of the surface of touch and the muscles, with the central organ, is diseased, the loss of motion would display itself here first. This explanation is directly corroborated by the observed consequences of diseases of the central organ, the cerebellum, and conversely by diseases of the cerebrum. In the work of Solly on the human brain, two cases of disease confined to the cerebellum are quoted from Serres, in which the leg on the opposite side was palsied, with comparatively little affection of the arm; and another, after Abercrombie from Morgagni, in which scirrhus of the left lobe of the cerebellum was followed by paralysis of both inferior extremities; thus showing that whether the central organ itself is diseased, or its influence is cut off by disease of its commissural connection, the effect is the same. It is also a remarkable fact that in cases of hemiplegia, where recovery takes place partially or wholly, the leg precedes the arm in the process, just about in the same proportion of cases, that the seat of effusion is in the cerebrum compared with the cerebellum. It is, as we should naturally suppose would result from the mind's recovering the power that it exerts through the cerebellum, first, in consequence of the gravamen of the disease being less felt there.

The rationale of all the varied phenomena which take place when the great centres, or their commissural connections, the anterior and posterior columns, are diseased or injured, I conceive to be this. The mind having built up and acquired its power over the muscular movements of the body in the manner above stated, employs both brains to maintain a certain degree of tension on the nerves leading to the muscles, &c., according to their respective powers. This is done by the intervention of the anterior and posterior columns. The power derived from the cerebellum is proportionately more directed to the inferior extremities, conformably to its habitual associations. That from the cerebrum is more directed towards the superior. This is in conformity to the rule, that all the works of man's hands are performed under the direction of the eye. Now in case of sudden disease of the centre, as in apoplexy—or of injury of the connecting medium, as in division of the anterior column, the power of that centre is cut off. And the mind, after making allowance for shock, being deprived of the help which it derived from that source, finds itself without the power of executing its accustomed movements. But it is a re-active principle; and for the same reason that when a large artery is tied, it sets about to restore the circulation through the smaller ones. It aims to re-acquire its lost powers; and, so far as it is successful, it re-acquires in the order in which it originally acquired them. In most cases of injury of the spinal marrow, and in some cases of apoplexy, the patient dies before this re-active

tendency develops itself. And as a much larger proportion of power is derived from the cerebrum through the anterior column, annihilation of motion would be presented in all such cases where this part was severed. A superficial view, or a view which contemplates the nerves as having vital endowments, and not as acting in subserviency to a spiritual principle, would lead to the inference that the anterior portion was destined for motion. Thus the results of disease would seem to confirm the results of experiments, and still both be wrong. But in cases of slow disorganization, the mind meets with no sudden disruption of its energizing, and often gradually accommodates itself to circumstances. Such cases would be exceptional to the former. We might meet with instances of destruction of the anterior cord and persistence of motion to a degree inexplicable on the ground of vital endowments; while we could conceive of a gradually-increased activity of the cerebellum to compensate for the lost power of the cerebrum, which would enable us to account for them.

These conclusions are also confirmed by direct experiments on the two brains. In those of Hertwig, when the upper part of the hemispheres in a bird were removed, sight and hearing were lost, but were afterwards recovered; when the whole were removed, sight, hearing, taste and smell, were lost and were never regained, although the animal lived three months. In both animals, the cerebellum being intact, signs of sensibility to touch were manifested, and also of a capability to stand and direct motions by this sense.

All those experiments, again, on the cerebellum, from which the inference has been drawn that that organ was for co-ordinating or combining the muscles, so as to produce voluntary motions, may be explained as well or better by saying that it enables the mind to govern motions by touch. Such movements as were disturbed by mutilating it, as standing, walking, balancing, &c., were evidently those which are habitually associated with this sense. The chief points of difference are, that the latter explanation exchanges a vague and indeterminate expression for a lucid philosophical principle, and brings the office of the central organ into harmony with that of its prolongation into the spinal marrow.

This unnatural separation of the office of the posterior column from that of the cerebellum, is the legitimate consequence of Sir Charles' deserting general analogy and anatomical deductions, and trusting solely to experiments, without the true key to guide him in their interpretation. It forms one of the chief objections to his system; so weighty, indeed, that Sir Wm. Hamilton takes exceptions to it alone while, in deference to the physiologists of Europe, he gives in his adhesion to the general principle. The limited number of fibres that, according to Solly, pass from the restiform bodies to the anterior columns, cannot alter the case, although their purpose for the present is somewhat obscure. Whether they serve to connect the function of respiration, with the cerebellum—as the fact that some fibres of the portio-dura come off from them would seem to indicate—or are the counterparts of the processes to the testes, there can be no doubt that the main connection of the cerebellum is with the posterior columns, and that their functions ought to harmonize.

Finally—It is admitted by Sir Charles, that the mind must be cogni-

zant of the state of the muscles in order to regulate their contractions. And as he has a set of fibres to transmit motor impulses from the brain to them, so he must have another set to transmit sensitive impulses upward. Here he draws largely on the imagination, and both motor and sensitive impulses are inventions to begin with. And what anatomist has ever traced two classes of fibres, that lose themselves in the muscular structure, one of which on being irritated gave rise to muscular contractions alone, and the other to sensations? Some late physiologists have improved on this idea, and have invented a third fibre to account for the reflex motions, in accordance with the rule, that for every specific endowment a distinct fibre is necessary. But this process of laying up the nervous fibres, like the laying up of a rope with three strands, is found, by the knowing ones, to hazard the inconvenience of rendering the whole cord unwieldy, by its size. And it may be seen, by the last edition of Carpenter, that this branch of manufacture has fallen into disrepute. It is, however, of little consequence logically, how many of these fibres with specific endowments are called into being. One class only is necessary to hold the mind in relation with the muscle, according to the view given above. To imagine, therefore, a series of fibres for motor impulses, and another to render the mind cognizant of the state of the muscles, is to introduce two causes to account for that, for which one will account as well.

To recapitulate:—The view of the nervous system promulgated by Sir Charles Bell, does not, in the first place, exhaust or give a full account of the contents of the experiments and pathological observations on which it is based, inasmuch as some phenomena are unexplained by it. In the second, it is not necessitated by those phenomena which it does explain, inasmuch as they can be explained by another supposition. In the third, it is directly contradicted by pathological facts, so admitted by its own supporters. In the fourth, it divides in function, parts anatomically united in structure. And in the fifth, it violates an important philosophical law, by unnecessarily multiplying secondary causes.

In view of these facts it may be safely said, that among the mysteries connected with the nervous system, not the least is the circumstance that the medical profession as a body should settle down in the belief that this view presented the sum and substance of all truth in the department which it treats, and formed the starting point for all future investigations.\*

B. H.

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#### COMPOUND COMMUNUTED FRACTURE—OSSIFICATION OF THE ARTERIES.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—The following case, though fatal in its result, you are at liberty to publish if you consider it worthy of an insertion in the Journal:—

Mr. David Caswell, aged 62, with an impaired constitution, received

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\* On page 478, vol. 50, line third from top, for "the organs of sense," read *that organ of sense*.

a compound comminuted fracture of the lower third of his right leg, by the falling of a stone which he was assisting to raise with a derrick, on Friday, May 19th, just as the workmen were about leaving off work for the night. The stone was a square block of granite,  $4\frac{1}{2}$  by 5 feet in length and breadth, about 18 inches thick, and would weigh, by estimation, two tons. One corner of the stone struck his leg; the opposite side lay upon the wall, where it rested at an angle of a little over 45 degrees, throwing the weight of the stone upon his limb, which lay on the hard ground without anything to protect it.

I was called immediately, in consultation with Dr. A. Godding, Mr. C.'s family physician, and was accompanied by Dr. J. Russell, of Natick, who happened to be at my office when the accident occurred. The soft parts of the leg were severely lacerated, and there was considerable hemorrhage from the external wound, and some effusion into the cellular tissue. Applied immediately a bandage from the toes to the knee, which arrested the hemorrhage. Placed the leg in as easy a position as possible for the time being. Prescribed an opiate, and ordered stimulants till re-action came on.

Saturday, 5 o'clock, A.M.—Met Dr. Godding. Re-action had come on during the night. Pulse 60. Considerable complaint of prostration on the part of the patient. The foot, and the leg below the seat of injury, apparently lifeless. Decided to amputate at 8 $\frac{1}{2}$  o'clock.

At that hour found the patient quite as comfortable as when we left him, and ready, as he expressed himself, for the operation. Dr. Lincoln administered ether, and I amputated the leg between its upper and middle third, assisted by Drs. Godding and Lincoln of this town, and Russell of Natick. Found the anterior and posterior tibial arteries ossified to some extent at the point of amputation, and on dissecting them out of the amputated limb their inner surface was found completely studded with small spiculæ of bone, forming, in some places, cylinders from one half to two inches in length. Many of the anastomosing branches apparently impervious, feeling like small wires in the muscles and integuments.

The effects of the ether passed off very kindly in the course of three or four hours, and left the patient quite comfortable. Pulse 65. Appeared, as his attendants expressed themselves, during the afternoon "like himself again."

May 21st, 5 o'clock, A.M.—Had rested well till 12 o'clock. Began then to grow restless, and opiates were administered by his attendants according to directions. Delirium at times, with occasionally a little subsultus. Pulse 70. Skin pale and clammy. Countenance anxious and haggard. Stump very little swollen. Dressings quite loose. Cadaverous smell. Over the knee-joint, and the thigh above it, tense and crepitating to the touch. Bowels distended and tympanitic. Morph., gr. 1-5.—7 o'clock, patient more quiet. Pulse 80. Turpentine enemata, without any effect upon the bowels.—2 o'clock, P.M., Pulse 100. Patient gradually sinking. Emptied the bladder with the catheter. Died at 11 o'clock, this evening.

We intended to have made a post-mortem, for the purpose of ascer-

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taining the condition of the arteries throughout the system, and particularly the anastomosing branches about the knee-joint and above it, in the amputated limb; but before 9 o'clock the next morning decomposition had gone so far that no one would think of attempting an examination.

For the past three or four years of Mr. C.'s life, he had been in the habit of eating chalk daily, to an almost incredible extent. He carried it constantly in his pocket, and said he ate it because he loved it. From what I can learn by his friends and neighbors, who had frequently conversed with him on the subject, he had become as much attached to his chalk as any man ever did to his "favorite glass" or "sable quid." It is impossible to ascertain precisely the amount he had eaten per week or year; but I should think, by what information I can get from the traders in our village, of whom he obtained his chalk, that he must have consumed, on an average, from 1 to  $1\frac{1}{2}$  lbs per week.

*Query.*—What effect would the habitual use of creta, for three or four years, to the extent which Mr. C. had used it, be likely to have on the constitution of an individual who was healthy when the habit was contracted?

L. MILLER.

Winchendon, Mass., July 25th, 1854.

#### ARSENIC AS A REMEDY.

[Communicated for the Boston Medical and Surgical Journal.]

METALLIC arsenic appears to have been unknown to the ancients. Orpiment and realgar (the yellow sulphuret and the arsenicum rubrum) were the only preparations of this substance in use among the Greeks, or the Arabian physicians of the tenth century. Rhazes, of Avicenna, used principally the realgar, internally for cough and asthma; and orpiment as an external application in some cutaneous diseases. In 1774, Lefebvre, of St. Ildephont, published a pamphlet, entitled "Approved remedy for the radical cure of the hidden, open, or ulcerated cancer." Merat and Delens (*Dict. Mat. Med.*) mention that when Lefebvre's pamphlet was published, the remedy was tried in the Lyons Hospital upon several patients affected with various forms of carcinoma, and the result found unsatisfactory. The same authors relate that Dr. Minniks, of Philadelphia, experienced better effects. In 1789 Adair published (*Medical Commentaries of a Society of London Physicians*) the favorable consequences of arsenic administered internally in obstinate cases of tetter; and Rush confirmed these observations about the same time. Cazenave says (*Dictionary of Medicine, Paris, 1844*) "It is now proven that wonderful results are obtained with arsenious acid in the treatment of cutaneous diseases, both in the dry forms and in chronic eczema and intertrigo. This remedy is less successful in papulous eruptions, and in general it has almost failed in the various forms of porrigo, acne and sy-cosis. It may be useful in the elephantiasis of the Greeks; to the treatment of acute exanthemata it is not applicable, as a general rule." Dr. Physick and Hans Roane published, in 1805, observations respecting the use of arsenic in scrofulous sores, malignant ulcers of the face

with necrosis, and in erosions of the superior lip. The Philadelphia Medical Museum (Vol. 1st, p. 47) contains some interesting remarks upon this subject. The action of arsenic in fever and ague has been a debated question for a hundred and fifty years. Hadrian Stevegot made use of the drug in the treatment of intermittent fever in Germany, at the close of the seventeenth century. The celebrated Störk combated its use with great vehemence. Fowler introduced into England the administration of arsenic for this malady, and the preparation used by him still bears his name. Prejudice against the drug prevented its immediate adoption in France; and it was not extensively used until the non-importation of Peruvian bark during the interruption of commerce by the long continuance of war, compelled physicians to find a substitute for quinia. When peace was restored, arsenic was abandoned, and remained forgotten till recently, when an effort has been made by an army surgeon (Boudin) to re-introduce it.

Boudin, Physician-in-chief of the military hospital du Roull, treats almost all linnemic affections, regardless of symptoms, with arsenious acid. This distinguished French military surgeon says—"After commencing to administer the twenty-fourth part of a grain, I gradually became convinced, with many other physicians who had obtained similar results, that arsenious acid preserves, even at the small dose of one hundredth part of a grain, all its medicinal energy, not only in the treatment of marsh intermittents, but also in that of a number of other diseases. With a single dose of the one hundredth part of a grain I had often removed radically fevers, contracted in Algiers or on the Senegal, which had resisted the sulphate of quina and change of climate."

The following is his formula:—R. Arsenious acid—one centigramme. Combine intimately with one gramme of some inert substance, and divide into 20 papers. Each powder will contain half a milligramme, or the one hundredth of a grain of arsenic.

"This preparation," says Boudin, "is the one which I use most frequently; a powder is dissolved in a spoonful of water, and the solution taken five or six hours before the paroxysm is expected."

In 1842 the results of his treatment were as follows:—

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| Cases cured by arsenic solely             | - | - | - | 188 |
| Cases resisting bark and cured by arsenic | - | - | - | 57  |
| Cases resisting arsenic and cured by bark | - | - | - | 11  |
| Resisting both bark and arsenic           | - | - | - | 8   |
| Total                                     |   |   |   | 264 |

In 264 cases treated by arsenic, only 19 failed of cure; and 8 of the 19 resisted bark also.

Boudin's present practice is to give the one-hundredth or two-hundredth part of a grain every fifteen minutes several times repeated, desisting ten hours before the paroxysm. Gastric correctives and generous diet complete the treatment.

Herbivorous animals are easily killed by moderate doses of arsenic. Rabbits, horses, cows and poultry fall speedy victims, while carnivorous animals bear enormous quantities of the poison. Reaumer gave one

ounce of arsenic to a bear; the effect was only active catharsis. The inhabitants of countries infested with wolves find that monstrous doses will not destroy these animals; indeed, any quantity capable of being eaten seems to be wholly inefficacious to destroy life. On the other hand, Dr. Desportes found that fifteen or twenty grains of nux vomica would poison a dog of considerable size almost instantly; three times this amount had no injurious influence on a goat, and ninety-two times this amount was necessary to kill a hen. This experiment is reported in the "Thesis de la Faculté de Paris," 1808, No. 54, and repeated on the following year by Magendie with the same result. The nut which is so inoperative upon ruminating and gallinaceous animals, is a most virulent poison for the carnivorous species. Animals of tenacious vitality, as the wolf, fox, raven, &c., which are scarcely affected by arsenic, are poisoned by small doses of nux vomica. Teste, of Paris, first pointed out this physiological law.

E. S.

Attleborough, July 25, 1854.

## REMARKABLE CURE OF EPILEPSY.

BY W. A. ALCOTT, M.D.

*To the Editors of the Boston Medical and Surgical Journal.*

THE subject of prevention rather than cure, has for twenty-five years occupied my attention, as some of your readers well know. Still I do not wholly escape the charge of patients, especially in chronic complaints—consumption, scrofula, dyspepsia and neuralgia. My *forte*, however, if *forte* I have, is a peculiar treatment of incipient phthisis; in some thousands of cases of which, I have been able to afford essential aid.

But I have taken my pen, now, to give you the outlines of treatment of a case of epilepsy last winter; for it deserves to be recorded somewhere.

Henry W. Abernethy, when twelve or thirteen years old, was severely beaten by a stouter boy, till it was found his skull was injured. Yet, as I believe, no surgeon was called—certainly the trephine was never used. Soon afterwards he became subject to attacks of epilepsy; and in a few months they became frequent and severe, especially during the winter and spring. They were probably aggravated (not induced) by abuses of appetite—especially the *third* appetite.

The attacks continued, year after year, with more or less of frequency, and were evidently affecting both mind and body. The medical art was invoked, especially, in New Haven, Conn., but to no purpose. Botanic medicine evidently injured him. In August, 1853, he went to the water-cure establishment—rather the air-cure—of P. P. Stewart, in Troy, N. Y. Here he remained a long time. The treatment, here, was much exposure of the skin, hand-rubbing, dry packing and occasional bathing. His diet, though ample, was unstimulating. For a few months, he seemed to improve. In one instance, there were no attacks for several weeks. But in December and January they again became more frequent. What should be done? The dreaded February, March and April were to be



passed through, and the fits were threatening. They occurred almost weekly, or quite so—in one instance twice a day.

He came under my special care about Feb. 1, 1854. I saw there was a close connection between excess and irregularity of diet and the paroxysms. The third appetite he had already brought into subjection, and was suffering no after consequences. The main indication of cure, therefore, was to proclaim and enforce martial law to the stomach and palate, at the same time keeping up a measure of the old treatment, especially friction, dry packing and warm and cold bathing.

I stood by him fifty-five days—never left him during the time, except during one meal. In this whole time he never had an attack, nor even the usual vertigo which sometimes preceded, and which sometimes in former days had threatened, but did not bring with it an attack. In short, he has not had the slightest vestige of his disease from that day to this, or at least from that day to the date of a recent letter containing the following lines:—"Five months and a half without a symptom! I have not the slightest feeling of them. Far from it."

He is now at work, in moderation, on a farm, in Woodbury, Litchfield Co., Conn. He still follows the directions with regard to diet and regimen, but I am not so rigid with him as the case demanded at first. He used to be subject to attacks of numbness or dizziness between his paroxysms. I have seen it require the friction of two or three persons to restore him. But nothing of this has occurred since Jan. 30, 1854. Before March last, he had never been able to walk over six miles a day in his life. On the fiftieth day of my treatment, he walked ten miles in extreme cold, almost without stopping. He is not strong nor fleshy; but is slowly improving. And he was worth saving, and so are thousands that might be saved in a similar manner. I do not wish to be understood as saying that all epileptic patients can be saved—above all, in this particular way—for I know better. I only say that many may be saved—and in this very way; I believe thousands.

Some of your readers may be glad to know the particulars of the treatment in this case. And yet such are few. Nine in ten will either yawn over them, or cry "Grahamism!" But the truth is, that the treatment transcended all ordinary Grahamism; and would not generally be submitted to by physicians or patients. They would say that the remedy is worse than the disease. Few people are willing to pay the price of recovery from chronic disease, even if physicians were anxious to cure them. The world is not yet in earnest to seek health. It is yet a gaming table—where money, women, office, or paradise is played for. And what is not demanded, will not be had. When people can be trained to be healthy enough to know the worth of health, then health—like the millennium—will come; and not a single day before. We may pray for it, but we must also work for it.

But unless I have evidence—greater than I now possess—of a desire for details in such cases, the following is all I will add.

When I saw clearly the connection between Henry's attacks of epilepsy and the state of his stomach, I said thus: "Now, Henry, as you are going on, you can never be any body, either in this world or any

other. You may not—you probably will not—immediately die. You may live many years ; but, depend upon it, you never can be good for anything. But you are worth saving, and probably *can* be saved ; though not by medicine or water-cure. It will, however, cost you a hard struggle. But I will stand by you, if you will make the effort. What do you say ? Are you ready for a strong grapple with the disease, and to try to see whether you and I, together, can worst it ?”

He was about seventeen years old, sensible—peculiarly so ; and tolerably intelligent. His eye brightened. He said he was ready for the onset. He wished to live and be useful, both for his own sake and for the sake of his friends.

I then made my conditions. They were few and simple, but I think pertinent. I did not stipulate for pay—perhaps I erred here. It would have increased his faith, and “according to your faith be it unto you,” is as applicable, in doctoring the body, as the soul.

Henry accepted the conditions. We shook hands, and he started in the race. It was for his life. He was pretty true to his pledges, and seldom complained. In a few instances he demurred, and in one or two he was irritable ; but he afterwards repented and confessed. Once or twice he ate some candy between meals ; but of this, too, he gave evidence of repentance. The results of the experiment I have already stated, thus far. As to the future, I can only say, that if he continues to obey the *higher law* I have put him under, he will live and get entirely well ; though he may never be a Sampson or a Hercules. But if he disobeys, he must die—a condition, however, which is imposed on us all, sick or well—here or in any other locality—in this world or in the world to come.

*Auburn Dale, July 28, 1854.*

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THE LATE DR. WALDO I. BURNETT.

[IN accordance with a vote passed at a late meeting of the Boston Society of Natural History, Professor Jeffries Wyman, of Cambridge, read to the Society a notice of the life and writings of the late Dr. Burnett, of this city, which has been published in the *Daily Evening Traveller*. Mention was made, in a previous number of the *Journal*, of the death of this young and distinguished naturalist, and we gladly devote all the space we can spare in to-day's *Journal* to a few brief extracts from Dr. Wyman's just and feeling tribute to his memory.]

WALDO IRVING BURNETT was born in the town of Southboro', Mass., July 12th, 1828. His father (the late Dr. Joel Burnett) was a man of distinguished excellence in his profession, and to the qualities of a good and useful citizen united those of an ardent lover of nature, of whose works he was a close and faithful observer. Botany and entomology especially received his attention, and without the aid of genial spirits, or the intercourse with kindred minds, was studied with no ordinary zeal during the few leisure moments which were left him after the demands upon his time by a laborious profession had been satisfied. His love of

nature was transmitted to the son, and was manifest in early boyhood, when the observation and study of insect life took a strong hold upon his mind. His father experienced a just pride in witnessing these tendencies; but in place of encouragement, which he at first extended with delight, he was soon, though reluctantly, obliged to substitute restraint. His son's mind was too intently absorbed in his pursuits, and fears were excited lest his studies, prolonged into hours stolen from the usual period of repose, should be attended with disastrous results to his physical constitution. His passion, however, grew with his growth and strengthened with his strength, and in the face of all obstacles, through health and through sickness, from an early youth to his early grave, it was never abated.

He had not the advantage of a collegiate education; this he chose to forego, not from any indifference to its value, but from a sensitive unwillingness to subject his father to any unnecessary expenditure of his means. He gave early indications of great mental activity, and mastered with ease all the studies of the Academy; in mathematics, especially, he was unusually proficient, and drew from his teacher the confession that in this department he was no longer capable of giving him instruction; and it was the habit of other teachers in the neighborhood to send to young Burnett for the solution of difficult questions which they themselves were incompetent to master. Almost without assistance, at a later period, he made himself familiar with the French, Spanish and German languages, and during the latter part of his life had made some progress in the Swedish.

At the age of sixteen he had become thoughtful beyond his years; and then commenced the development of those tendencies in his mind which ever afterwards were so conspicuous, and which continued to exert a controlling influence; viz., the desire of gaining an insight into the nature of things, and of forming philosophical ideas and conceptions of natural processes, conceptions and ideas which can be obtained only by the exercise of the higher powers of the mind. Mesmerism, materialism and theological questions occupied his thoughts, and were frequently written upon and discussed by him. On all of these he manifested independence and continuity of thought, and persistence in whatever direction his mind was turned. It was at this early age that his interest in the study of medicine commenced, when he accompanied his father in his professional visits, and witnessed the effects of disease, as manifested in the examination of bodies after death. Entomology now especially engrossed his thoughts, and nearly all his leisure moments were occupied in collecting, studying and classifying insects. While yet in his sixteenth year his father died. This event materially changed his prospects, and was met with firmness and decision, and in the course of the following year, finding that something must be done for his support, he commenced teaching school, and at the same time gave his attention to the study of medicine.

The subsequent years of his student life were spent under the direction of Dr. Joseph Sargent, of Worcester, with whom there grew up warm mutual personal regard and friendship; in the Tremont Medical School

in Boston, which has given to the profession so many zealous and productive laborers in medical science; and in the Massachusetts General Hospital. He was ardent and industrious as a medical student, but never allowed his attention to be withdrawn from the study of nature, the microscope becoming his constant companion, and a source of never-failing pleasure. As evidence of his ability it may be stated that in two successive years he gained the annual prize offered by the Boylston Medical Society. The subject of the first essay was *Cancer*, treating especially of its microscopic structure; and of the second, *The Sexual System, or the production of being considered as to its physiology and philosophy*.

In 1849, at the age of 21, he graduated in medicine, and soon after visited Europe, where his attention, especially at Paris, was given almost exclusively to natural history and microscopic observation. The expectations of intellectual progress which he now looked forward to with so much interest, were soon doomed to severe disappointment. It was in Paris that he received the first serious warning that consumption, the disease which eventually destroyed his life, had already marked him for its early victim. After an absence of only four months, he re-embarked for America to receive the benefit of a more genial climate in one of the Southern States, and each successive winter he passed either in Carolina or Florida, in order to avoid the inclement and uncongenial climate of New England. He had now no permanent location, was constantly shifting from place to place, to mitigate, as far as possible, the steady progress of his disease. Everything seemed adverse to anything like connected study. Nevertheless, it was during these few unsettled years that he accomplished an almost incredible amount of intellectual labor. He was incessantly occupied with his microscope; his mind was ever on the alert, and he allowed scarce a day to pass without some observation, without something added to his stock of acquired knowledge.

In the winter of 1851 he delivered, at the Medical College in Augusta, Ga., a successful course of lectures on microscopic anatomy. In the summer of 1852 he prepared the principal work of his life, the Essay which received the prize from the American Medical Association. His two former prizes were competed for only by his fellow students; but the third, it is no small praise to say, was open to the competition of the whole medical profession throughout the country. \* \* \* \*

A few days before he died our late associate returned, after a winter's absence, to the home of his family, his bodily health exhausted, his energies prostrate. At first he entertained the hope that, as before, rest and quiet might restore him partially at least, to his usual health, and that he might yet have another opportunity of continuing those labors which he so fondly cherished; but his fast-declining strength, the anxiety of those around him, the announcement of his physician, and his own quick perceptions, soon told that life was drawing to a close, and that for him the great moment was near. In all this he was calm and serene, conversed on the approaching separation without faltering, gave utterance to expressions of deep affection to those who were bound to him by the ties of kin, uttered his prayer for forgiveness, and expressed the solemn conviction, which now rose paramount to every other, that if there yet

remained much for him to live for, there was yet far more to die for. On Saturday morning, July 1st, a few days before the completion of his 26th year, he died.

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## THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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BOSTON, AUGUST 9, 1854.

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*Microscopic, Anatomical and Physiological Specimens.*—By the politeness of Dr. Silas Durkee, we have been permitted to examine a series of microscopical specimens of minute anatomy, which he has had in preparation for the last three years. They number between one and two hundred, and have been prepared and mounted in an exquisite and artistical manner, fully illustrating the structure of every tissue in the human body, from the earliest period of embryotic life to adult age. The preparations are not confined to a single illustration of any one organ or tissue, but they are a series of views of them in various positions. The serous covering of the liver, and the vessels which permeate it, finely injected, are most beautifully shown. Then we have another specimen, which reveals the true structure of the liver, consisting of the inter- and intra-lobular veins, Glisson's capsule, and the whole portal system. The Malpighian bodies in the kidneys, together with the tubuli of the uriniferous apparatus, are remarkable fine specimens, far exceeding any thing of the kind we have ever seen. Many preparations of the eye, with its appendages, such as the muscular fibres of the crystalline lens, the pigment cells of the tunica choroidea, the ciliary processes, iris, meibomian glands, &c., were exhibited with fine effect, clearly elucidating the mechanism of that delicate organ which has been the theme of the poet and the admiration of the physiologist. Bone, with and without its earthy matter, some of the specimens finely injected, others not injected; nerves, and the capillary system, were also shown in all the minutiae of their structure. In fact, the whole series examined were most beautiful; their nice dissections and fine injections cannot be excelled; and they will serve as a monument of the skill, patience and industry of Dr. Durkee in after times, and may be considered as valuable contributions to physiological science.

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*Premature Burials.*—Within the last month, our attention has been called to several paragraphs in the newspapers, relating instances of persons having to all appearance died, and when on the point of burial, and in one case after burial had taken place, returning to life. We are not disposed to discredit all these statements, for some of them are doubtless correct in every particular; but we regret that the recent cases are not authenticated by the attending physicians. In some parts of Germany it has been the custom, for many years, to place the dead, previous to burial, in a building wherein is kept a constant watch day and night for a certain period, in order that, if there should be any sign of returning consciousness, the means might be immediately used to further restore life. But we understand that there has never been a single instance recorded, of any one coming to life in those repositories, after having been placed there as dead. It is decidedly proper, in cases of suspended animation, or where there rests an uncertainty as to

the departure of life, to wait a reasonable length of time before allowing a body to be buried; for there are few situations more horrible than to awake from a lethargic sleep within the narrow confines of a tomb.

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*Commissioners of Lunacy, for the State of Massachusetts.*—In accordance with a resolve of the last Legislature, the Governor of Massachusetts has appointed the Hon. Levi Lincoln, Dr. Edward Jarvis, and J. Sumner, Esq., Commissioners of Lunacy for the State. They have entered upon the duties assigned them, and have issued circulars and blanks (we presume to physicians in all the towns and cities throughout the Commonwealth), requesting their co-operation in the inquiries under consideration. The resolves, authorizing this commission, read as follows:—

"*Resolved*, That his Excellency the Governor, with the advice of the Council, be requested to appoint three Commissioners, to ascertain and report the number and condition of the insane in this Commonwealth, distinguishing, as accurately as may be, between the insane, properly so considered, and the idiotic or *non compos*, and between the furious and harmless, curable and incurable, native and foreign, and the number of each who are State paupers; also to examine into the present condition of the hospitals of the State for the insane, what number of patients can properly, and with due regard to their comfort and improvement, be accommodated in said hospitals, and what further accommodations, if any, are needed for the relief and care of the insane, and generally to examine and report the best and most approved plans for the management of the insane, so far as the size and character of hospitals, and the number of patients proper to be under the management of one supervision, are concerned. And whereas the present condition of the State Lunatic Hospital at Worcester is represented by the Trustees thereof to be such as renders it altogether unsuitable and unsafe for the purposes for which it is used, without the expenditure of a large sum of money, and that a much more eligible location for a hospital can be selected.

"*Resolved*, That said Commissioners be authorized to consider the expediency of disposing of the present State Lunatic Hospital at Worcester, and the lands therewith connected, or any part thereof, and of recommending a site for the erection of a new hospital or hospitals.

"*Resolved*, That said Commissioners be directed to report to the Governor and Council, on or before the commencement of the session of next General Court, and to accompany their report with plans and specifications, and estimates, of cost of any new hospital which they may recommend, or of any repairs which they may judge to be necessary to the existing hospital; also to report the estimated proceeds of the sale of the present hospital and property therewith connected, if they deem such sale desirable."

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*Place of Meeting of the American Medical Association.*—The editor of the Memphis (Tenn.) Medical Recorder recommends that the place of meeting of the Association, at its annual sessions, be permanently fixed—not only for the purpose of avoiding the constant strife engendered by fixing, each year, upon the next place of meeting, but for the convenience of the profession as a whole. He suggests that Washington City be hereafter the place, and that the American Scientific Association hold their meetings at the same place, a few days earlier or later. Many

advantages would be secured, and some inconveniences avoided, by such an arrangement, and we hope on effort will be made next year to have it adopted.

*Diarrhœa as a Precursor of Cholera.*—In addition to the evidence already in possession of the faculty, that cholera seldom occurs without the premonitory symptom of diarrhœa, more or less severe, two important proofs are referred to in the last number of the New York Medical Times. One is a letter from Dr. MacLoughlin to the Registrar-general of England, stating that in 1849, 3902 cases of cholera were examined into, and not one was found where the disease had come on without being preceded by diarrhœa. The other is a letter from the same gentleman to Dr. Mott of New York, dated in December last, in which he says that in 900 deaths from cholera which had taken place in London during the preceding four months, not one had occurred without the previous existence of diarrhœa, which had lasted from some hours to several weeks.

*Cure by Nutrition.*—This is the caption to certain advertisements in the public journals, emanating from a sect of practitioners of the healing art, who pretend that a new principle has been discovered in the treatment of disease, which they call the "*nutritive principle*." We cannot say more at present respecting this pretended discovery, than to refer to a case which has lately come under our own immediate observation. The facts are simply these. For the last seven months we have had a patient with organic disease under our care. He gradually failed; and when death seemed inevitable, the friends were anxious to adopt some other mode of treatment, and one of the doctors or professors in the new school was consulted. He said he could cure the patient, but before he attempted it, he must have his fee, *forty dollars*, or security for the same. It was obtained and given to him, and in return a document was prepared and given to the patient, containing the formulæ for preparing the nutritive fluids. It had very much the appearance of a bond or deed, for the conveyance of real estate—beginning with, "*Know all men,*" &c.; and terminating with, "*to have and to hold for his special use, and for the permanent restoration of his health,*" &c. The fluids themselves were harmless, and could have done no injury to the patient, although he thought he felt worse after taking them; but it is the receiving of money for such a useless and worthless document, especially under the peculiar circumstances of the case, that we, as well as all honorable men, have a right to complain of. It is one of those cases, however, that the laws cannot reach, without further legislation, and it is therefore the duty of the press to make known transactions like the above. The patient has since died, notwithstanding the prescription and bond given for the "*permanent restoration of his health.*"

*Sickness at the Massachusetts State Prison.*—Week before last quite a large number of the convicts confined in the State Prison at Charlestown, were suddenly taken down by a sickness resembling cholera in its symptoms. At one time there were 112 of the prisoners in the hospital. Owing to the prompt measures and skilful treatment of the attending physician, relief was soon afforded, and we learn that none of the cases proved fatal.



It is said that the cause of the choleraic symptoms was the eating of soured mashed potatoes by the prisoners.

Some of our readers will recollect that a similar disease suddenly attacked the inmates of the same institution at the time the cholera first appeared among us, in the summer of 1-32. Within twenty-four hours 115 were then attacked, and others afterwards, but not one died. A full account of it may be found in our 7th volume.

*Medical Miscellany.*—Dr. E. M. Graham, who recently murdered Col. Loring, at the St. Nicholas Hotel, New York, is represented to be a medical practitioner of New Orleans.—A woman in England has just had her 25th child.—Dr. Cottman, a native of Maryland, is now on a mission from the Emperor of Russia to this Government.—Cholera is still exceedingly destructive at the West, some sections of the South, and in the British Provinces.—Yellow fever has again been developed at Havana. It seems as though the disease had assumed a more terrible type than ever, the past two years.—There were born in London in the last week of May, 860 boys and 787 girls; during the same time there were 1143 deaths.—Gov. Crosby, of Maine, has appointed Dr. H. J. Cummings, of Portland, State Assayer, under an act passed by the last Legislature, creating said office.—The smallpox is prevalent at East Randolph, Vt., so much so that two pest houses have been established in the place.—During a violent storm which lately burst over Paris, the electric fluid entered a room in which was seated a man who had long been suffering from paralysis which deprived him completely of the power of speech. It set fire to the bed-curtains, and did other damage in the room; but instead of injuring the infirm man, it restored him to his speech and health.—Dr. Bard, of Savannah, has used the mur. tinc. of iron in scarlet fever, with great success, in doses of from five to eight drops in mucilage every four hours.—The bitter taste of quinine may be disguised by mixing it, or rather enveloping it in the middle of a tablespoonful of very thick mucilage of slippery elm.

PAMPHLETS RECEIVED.—A Catalogue of the Alumni, and of the Trustees and Faculty of Castleton Medical College, since its establishment in 1818.—A Report by the City Registrar of the births, marriages and deaths in the city of Roxbury, for the years 1851, 52, and 53.

MARRIED.—David Myerle, M.D., of Harneton, Pa., to Miss M. J. Burgess, of Boston.—Dr. H. Hatch, of New York, to Miss Chase, of Boston.—August 1st, E. S. Durgin, M.D., of Lowell, to Harriet Jane Stratton, only daughter of Austin Stratton, Esq., of Albion, Maine.—At Oyster Bay, Dr. T. F. Coraell, of New York city, to Libbie W. Ransom.—At Keenebunk, Me., Benjamin Johnson, M.D., of Dover, to Mrs. Eliza Chadbourne, of K.—In San Jose (Cal.) Dr. Wm. H. Wells, to Miss Sarah Woodward, both of Santa Clara.—In this city, Dr. Charles H. Hildreth, of Gloucester, to Miss Annie M. Dawley, of Doston.

DIED.—In New Bedford, Dr. Jonathan Sweet, aged 44.—In Windsor, Vt., Dr. Lawrence Hubbard, aged 62.

Deaths in Boston for the week ending Saturday noon, Aug 5th, 1851. Males, 64—females, 67. Abscess, 2—accident, 2—apoplexy, 1—inflammation of the bowels, 1—disease of the bowels, 3—inflammation of the brain, 2—disease of the brain, 3—congestion of the brain, 2—cholera mortus, 1—consumption, 15—convulsions, 8—cholera, 23—cholera infantum, 12—croup, 1—cancer, 1—dysentery, 10—diarrhoea, 1—dropsy in the head, 2—devility, 3—incurable diseases, 6—exhaustion, 1—erysipelas, 1—typhoid fever, 1—scarlet fever, 1—hooping cough, 2—intemperance, 4—inflammation of the lungs, 1—marasmus, 4—measles, 1—old age, 2—palsy, 2—pleurisy, 1—teething, 8—wicers, 1—worms, 1—unknown, 1.

Under 5 years, 62—between 5 and 20 years, 6—between 20 and 40 years, 32—between 40 and 60 years, 16—above 60 years, 15. Born in the United States 39—Ireland, 35—England, 2—British Provinces, 1—Germany, 2—Scotland, 1—Cuba, 1.

*Suffolk District Medical Society.*—The Suffolk District Medical Society held its monthly meeting on Saturday, July 29th, at 8 o'clock, P. M.

Dr. Silas Durkee exhibited a case of lupus exedens. The patient, a man of middle age, had had the disease four or five years. Dr. D. remarked that the application of the acid nitrate of mercury was followed by granulations, but in the course of a few days they would disappear, and the disease resume its former appearance. Dr. D. regarded the case as presenting the most obstinate form of this disease. Dr. Durkee exhibited also several specimens of microscopical anatomy, prepared by himself, showing the various tissues of the body. The veins which accompany the uriniferous tubes, the Malpighian bodies, the muscular rete of the skin, the mucous membrane of the stomach, were beautifully and distinctly shown, as also the muscular fibre surrounded by its capillary vessels.

Dr. Parkman exhibited two specimens of morbid anatomy; one a small encysted tumor removed from the eye-lid; second, disease of the knee-joint of eighteen months duration. The cartilages covering the condyles were extensively ulcerated, and had degenerated into a soft pulsatious mass.

Dr. Bowditch alluded to a case of disease of the lungs, which had recently passed under his observation. The patient, a young man, student, had been exercising his voice by speaking aloud in the open air, for some time. He complained only of a slight soreness of the chest, and a degree of lassitude. There was no cough, no loss of appetite or strength. The digestive organs were sound, and the function of the kidneys well performed. Judging from rational signs, should not have thought necessary to examine him, but as he came for that purpose, did examine him thoroughly, and found to his surprise a slight crepitation in the lower third of the left lung. Dr. B. remarked that he had met with a similar sign in two or three cases which were followed by hemoptysis, the formation of cavities, and ultimately by death. The sign might mislead one to suppose the case to be pneumonia, but the absence of cough, rusty sputa, with a natural skin and regular pulse, would preclude the supposition, and he was inclined to believe them acute cases of tuberculosis. Dr. B. remarked that the case was valuable as showing the importance of always making an examination of the chest.

*Voted*, to adjourn to the last Saturday evening in September.

*Turpentine in Diarrhœa.*—The following case of successful treatment is related in the Chicago Journal. The patient was a girl 3 years and 2 months old; had been under treatment of some kind for some time, without effect. The child was found lying on a cot, breathing rapidly, and with a death-like countenance. A napkin had just been removed, and the discharge contained nothing except mucus and muco-purulent matter. Two teaspoonsful of turpentine were prescribed, one-third of which was lost in the exhibition. An ounce of turpentine was mixed with three ounces of gruel, and injected into the bowels; and a flannel was moistened with turpentine and wrapped round the body. In a short time the child was found breathing easily and sleeping sweetly, although the surface was literally as red as a lobster. There was no further difficulty. A few drops of turpentine three times a day for four days, arrested the mucus and muco-purulent discharges, and a few doses of hydrarg. cum creta completed the cure.—*Memphis Medical Recorder.*